OPERATIONAL RISK MANAGEMENT

"Avoid the distractions of debates on political correctness and focus on the soldiers' mission, one that remains fixed, determined, inviolable. It is to win our wars."

General Douglas MacArthur   April, 1962

"We're out of the do more with less business. We can do less with less or we can do more with more, but we will no longer do more with less."
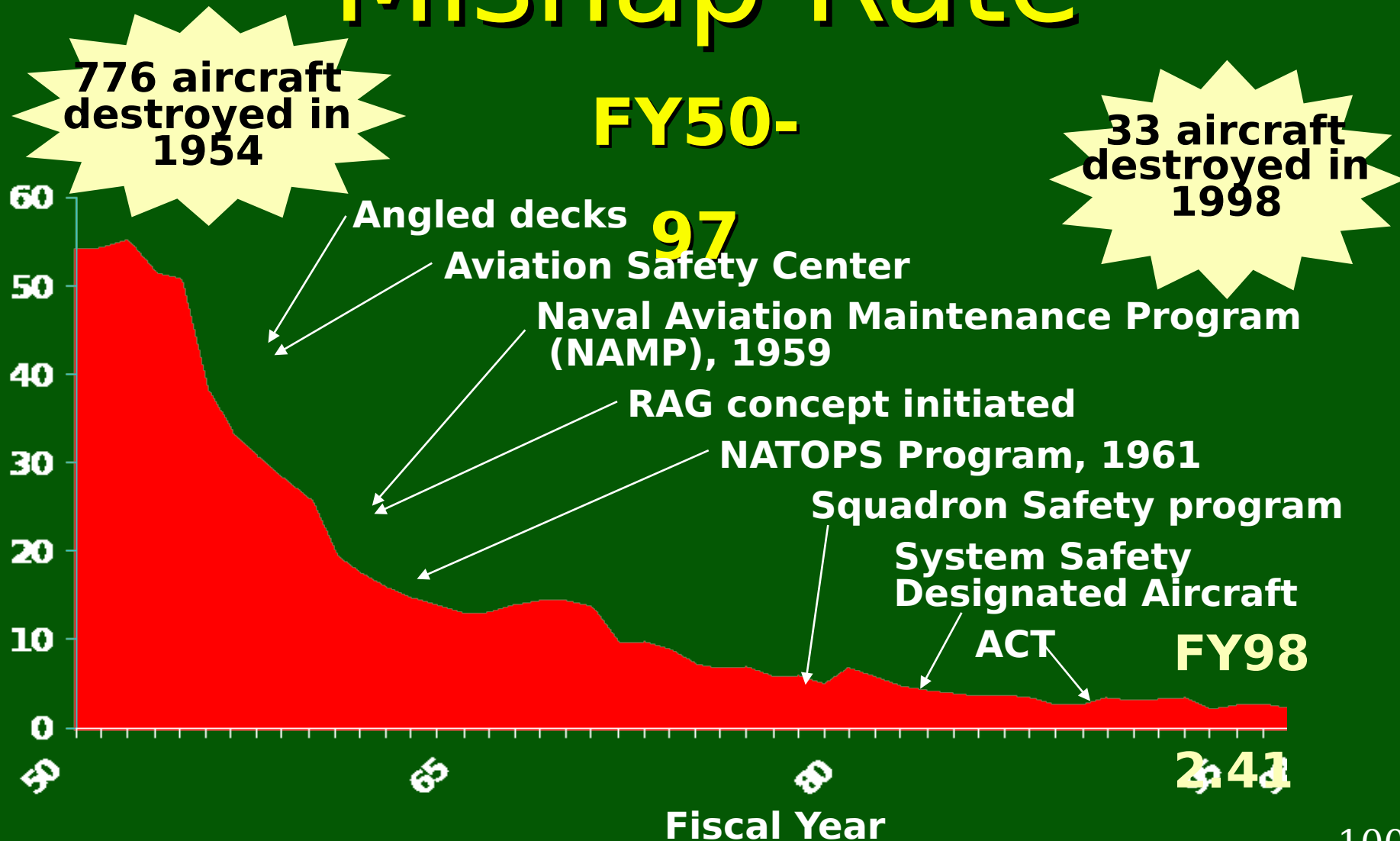
Admiral Jay Johnson

Naval War College

June, 1997

Naval Aviation Mishap Rate

FY50-97

776 aircraft destroyed in 1954

33 aircraft destroyed in 1998

Angled decks

Aviation Safety Center

Naval Aviation Maintenance Program (NAMP), 1959

RAG concept initiated

NATOPS Program, 1961

Squadron Safety program

System Safety Designated Aircraft

ACT

FY98

60
50
40
30
20
10
0

50   65   8   2.41

Fiscal Year

1001

Navy & Marine Corps Class A Flight Mishaps

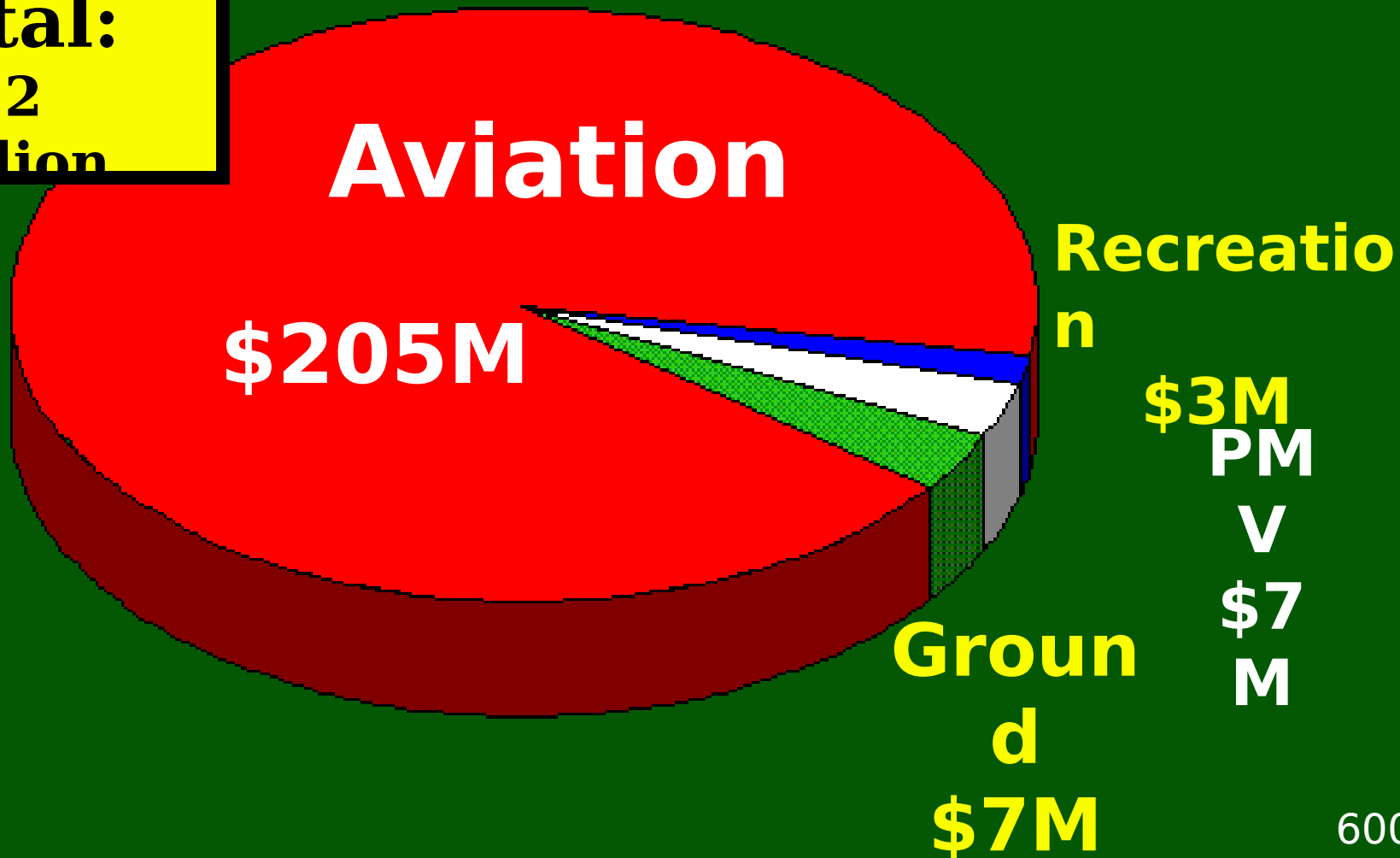**5 year trends indicate a plateau -   but FY 98 rate highest since FY 93**

Chart:
- 88-92: 2.61
- 93-97: 2.13
- 98: 2.43

1010C
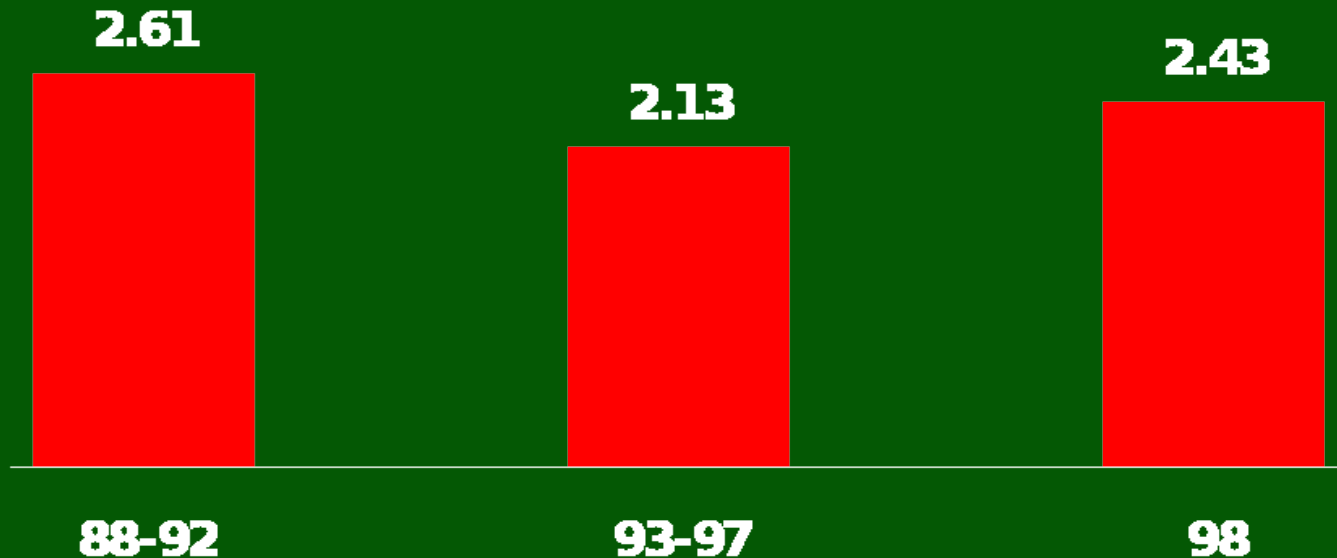
Cost of Mishaps
Navy and Marine Corps, FY98

Total: **$891 Million**

Aviation

$820M

Recreation **$12M**

PMV $20M

Shore/Ground $24M

Afloat $15M

6002C2
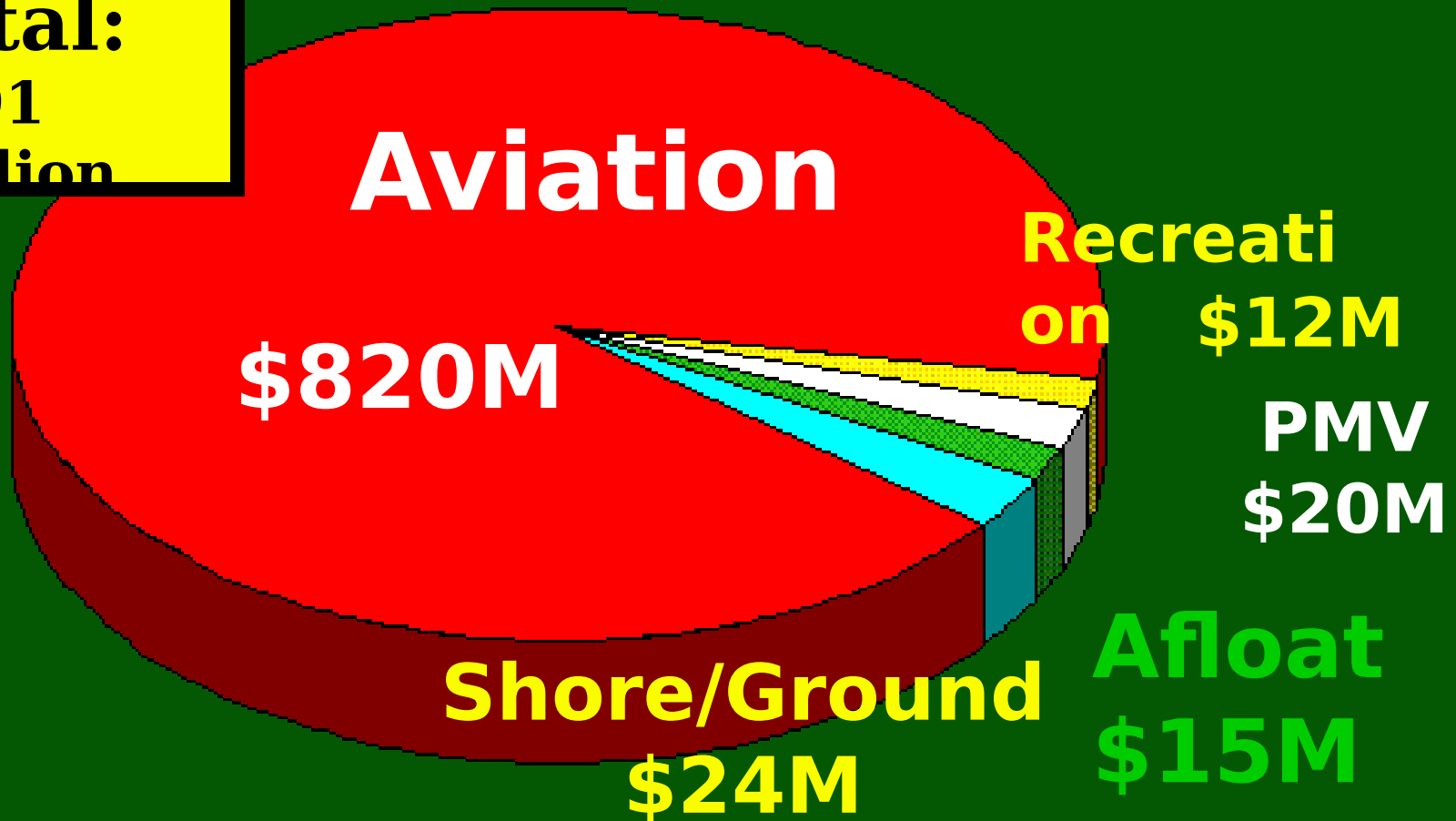
Cost of Mishaps
Marine Corps, FY98

Total: $222 Million

Aviation

$205M

Recreation

$3M

PMV $7M

Ground $7M

6002M2

All Services, Class A Flight Mishap Rates

Marines have highest rate

2.55 (7)

2.39 (15)

1.34 (9)

1.13 (13) USAF
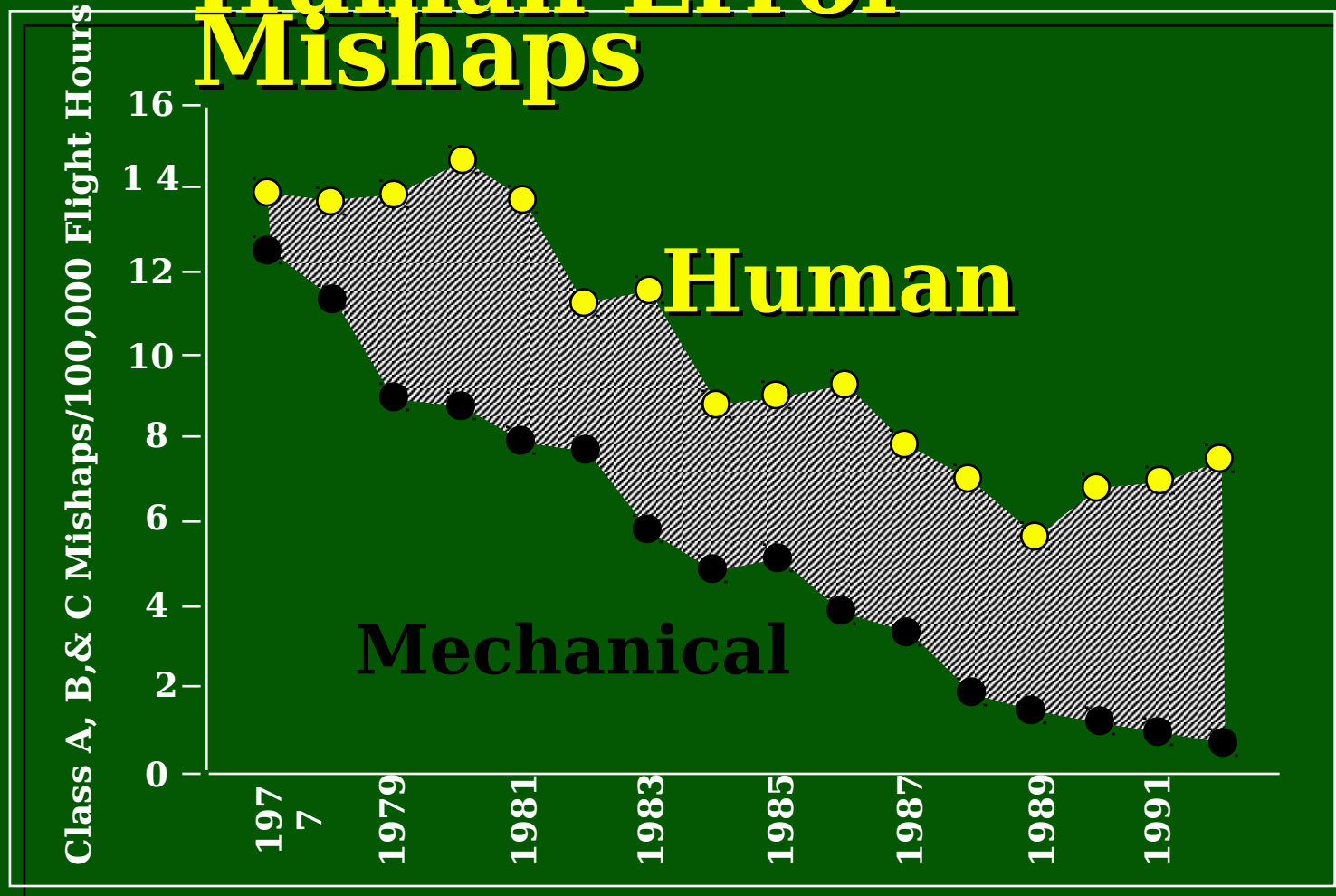
Navy

Army

Fiscal Year

1017

Human Error A Major Problem

4 of every 5 Navy Service Class A **flight mishaps involve human error.**

No Steady Decrease in Human Error Mishaps

All Navy-Marine Corps Mishaps, CY 1977-92

1106

Accident

The unplanned result of a behavior that is likely part of an organization's culture

1005A

Organizational Culture

"The way we do things here"

- Fundamental building blocks

- Group values and standards

- Medium for growth

- Shaped by leadership

Drives key decisions

501

Desired Cultural Attitudes

- **Accountability**

- **Integrity**

- **Focus on standards**

- **Continuous and open communication**

- **Intolerance for non-compliance**

- **Consistent decisions**

5011

ORM

Process ...

NOT Program

1052A

Operational Risk Management

> A Decision Making Tool

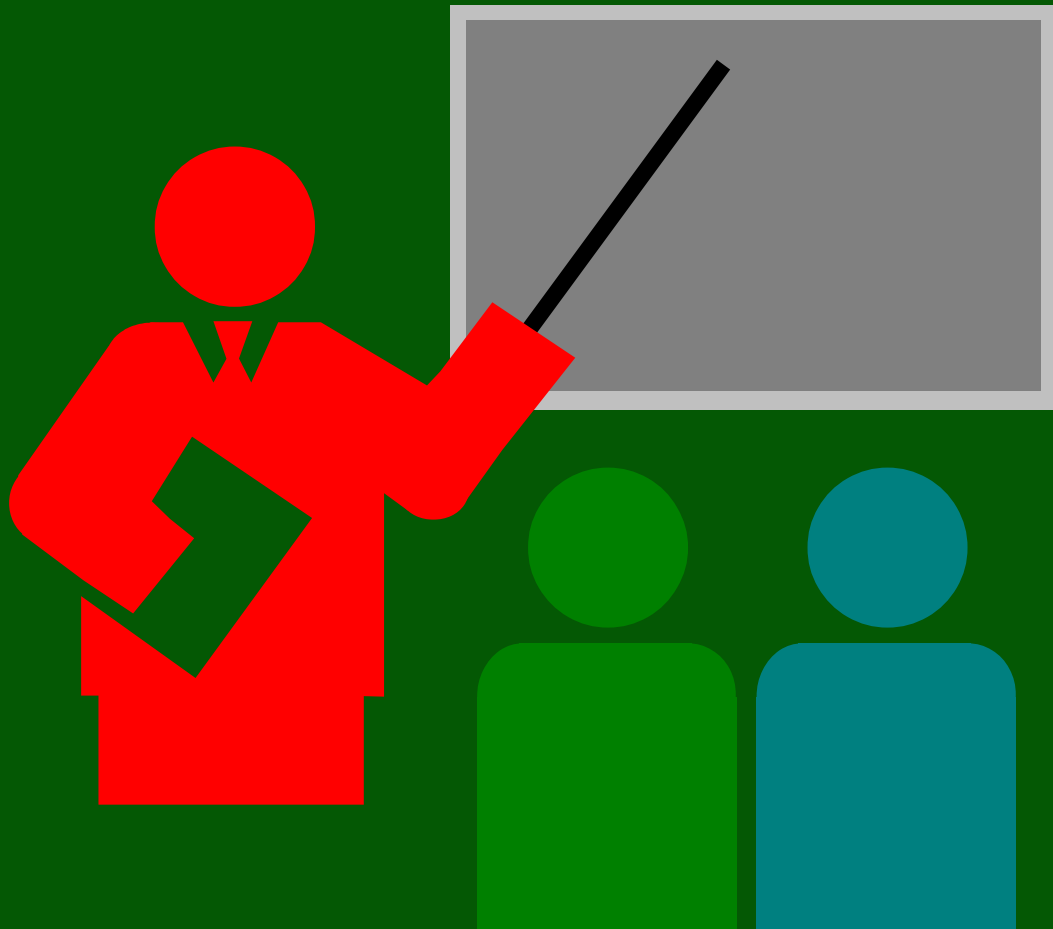**>** Increases Ability to Make

Informed Decisions

> Reduces Risks to Acceptable   Levels
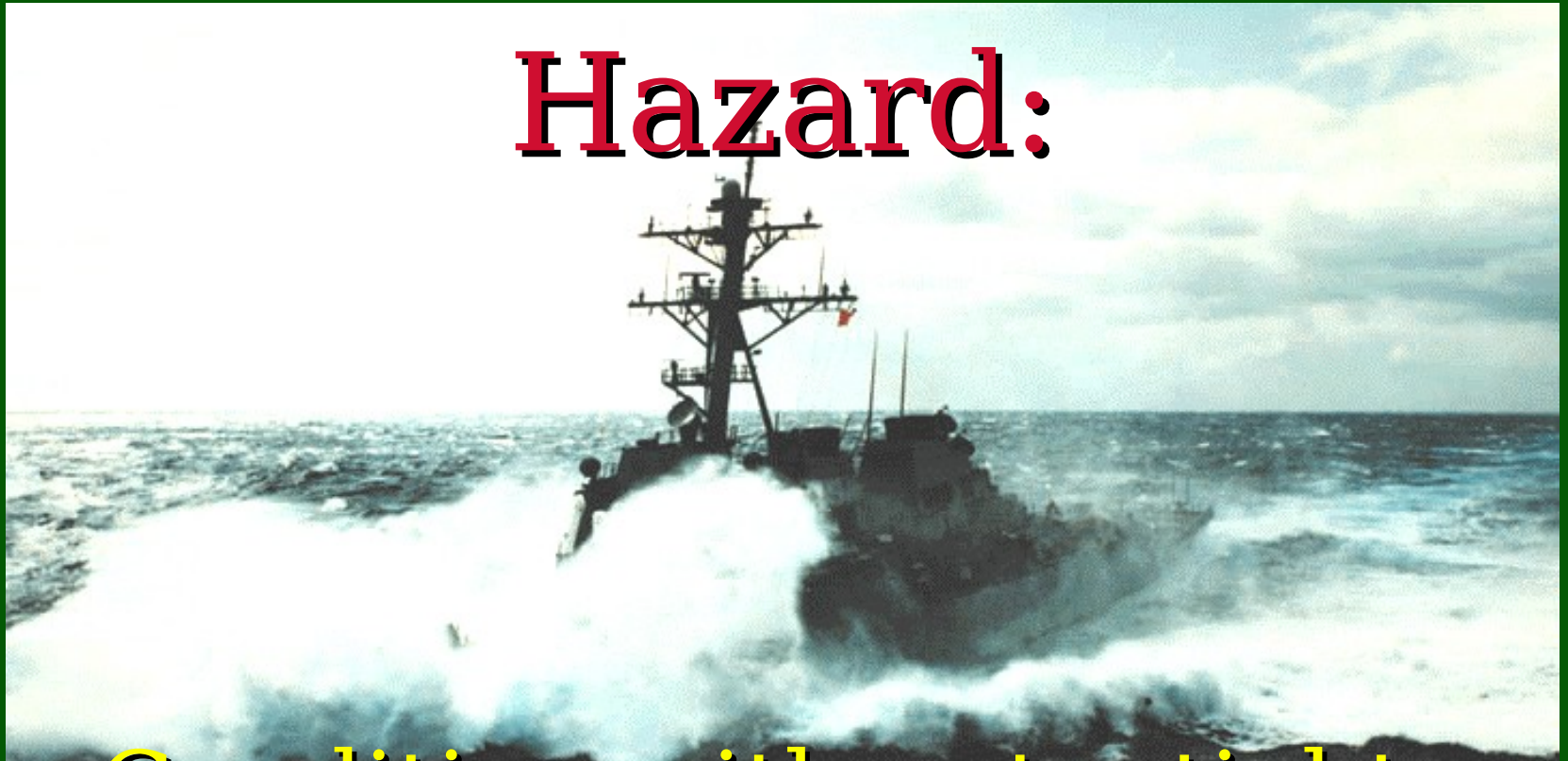
Operational Risk Management

Goal:

To optimize operational capability and readiness by managing risk to accomplish the mission with minimal loss.

ORM
Terms
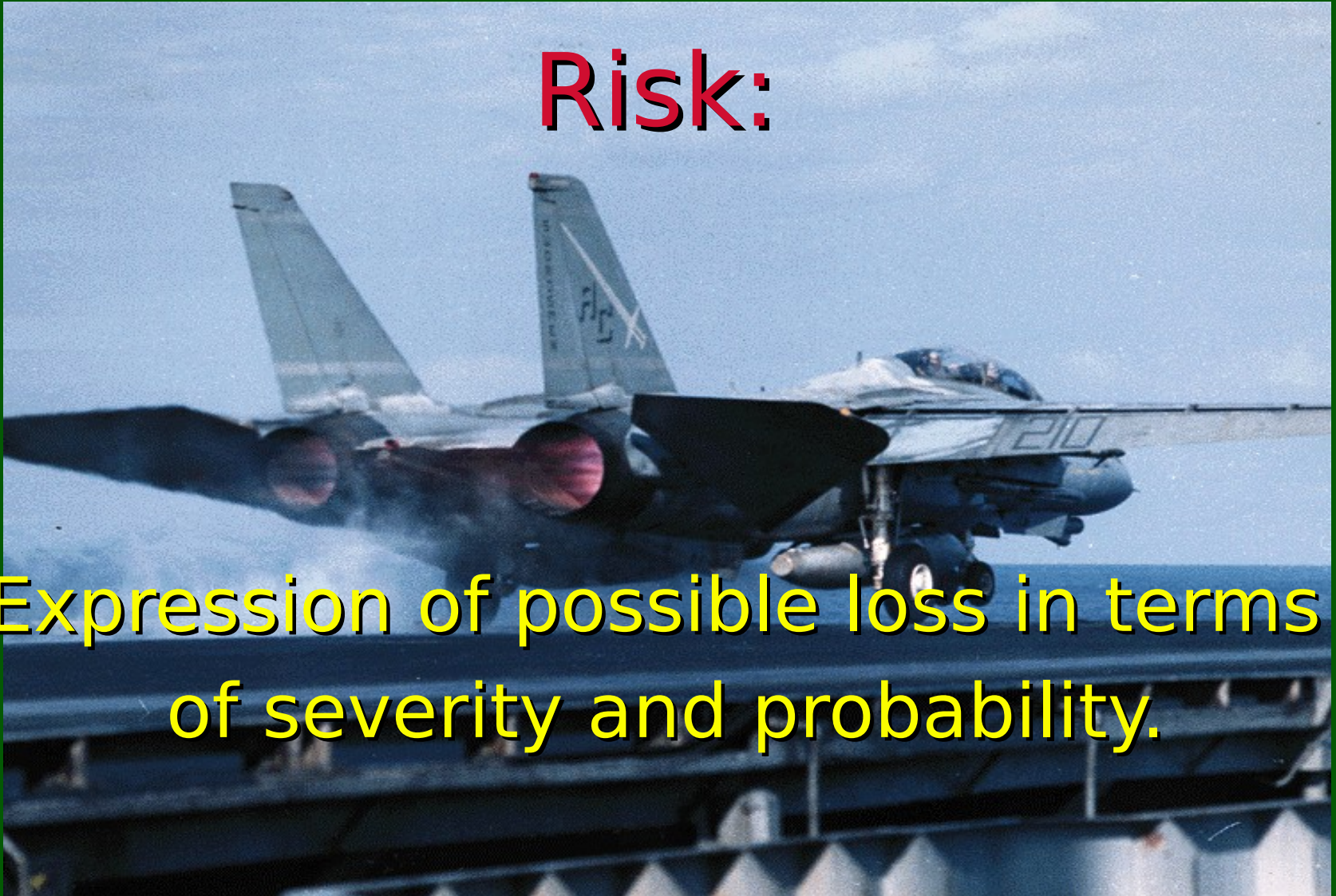
ORM Terms

Hazard:

Condition with potential to cause personal injury, death, property damage, or mission degradation.

ORM Terms

Risk:

Expression of possible loss in terms of severity and probability.

ORM Terms

Severity:

The worst consequence which can occur as a result of a hazard.

ORM Terms

Probability:

...elihood that a hazard will result in mishap or loss.

Hazard	**Risk**
Bad Weather	High Probability Flight Ops Cnx
Flock of Birds	Moderate Chance of Engine FOD
Walking on top of Slippery AC	Some Chance of Fall Producing Severe Injury

ORM Terms

Risk Assessment:

The process of detecting hazards and assessing associated risks.

ORM Terms

Control:
A method for reducing risk for an
identified hazard by lowering the
probability of occurrence
decreasing potential se
or both.

ORM Terms

Operational Risk Management

The process of dealing with risk associated with military operations, which includes risk assessment, risk decision making, and implementation of effective risk controls.
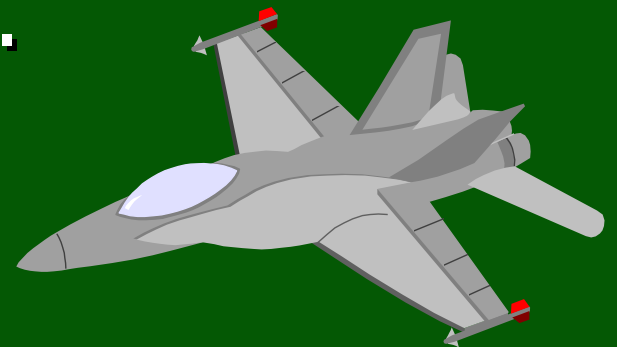
Operational Risk Management Process

1. Identify Hazards
2. Assess Hazards
3. Make Risk Decisions
4. Implement Controls
5. Supervise

Causes of Risk

* Change - The "Mother" of Risk
    * Resource Constraints
    * New Technology
  * Complexity
  * Stress

Causes of Risk
(Cont.)

* Human Nature

* High Energy Levels

* Societal Constraints

* Environmental Influences

* Speed/Tempo of Operation

Four ORM Principles

1. Accept risk when benefits outweigh the cost.

2. <u>Accept no unnecessary risk</u>.

3. Anticipate and manage risk by planning.

4. Make risk decisions at the right level.

ORM **vs.** Traditional Approach

ORM	Traditional
Systematic	Random, Individual-D...
Proactive	Reactive
Integrates All Types of Risk Into Plan	Safety As After-thought Or... Plan is Done
Common Process/Terms	Non-standard
Conscious Decision Based on Risk vs. Benefit	"Can Do" Regardless of Ris...

The Benefits of ORM

> Reduction in Mishaps

> Improved Mission Effectiveness

Operational Risk Management

Levels of Application

1. **Time-critical - On the run consideration of the 5 Step**

2. **Deliberate - Application of t complete 5-Step Process**

3. **In-depth - Complete 5-Step Process with Detailed Analy**

ORM Implementation Concept

- Naval Aviation Leads The Way!

- Leverage the Army's Investment in ORM

- PHASE I: JUMP START for Operational Units

- PHASE II: CNATRA/FRS/FWS Pipeline Training

- PHASE III: CNET Pipeline Training

ORM - Implementation Plan

- PHASE I: Jump Start for Operation

    - Naval Safety Center "Train the Trainer" Course

    - Senior Leader Training

    - Squadron Workshop Training

ORM - Implementation Plan

- PHASE II: Long Term CNATRA - FRS - Pipeline Training

    - VT/HT Flight Instructor (user/adv)
    - Student API (indoc) and VT/HT (user)
    - FRS (user)
    - FWS/Type Wing/MAW/MAG (adv)
    - CO/XO ASC course (leader)
    - Follow-on Train the Trainer School (adv/TtT)

Why do we need ORM

- USMC & All other services decreasing in size

- Number of missions increasing

- Can not afford to sustain the losses we historically suffer during training

ORM IMPLEMENTATION STATUS

DOCTRINE: **Naval doctrinal Pub 1,3 & 5 FMFM - 1**

POLICY: **MCO P3500.27/OPNAVINST 3500.39**

TRAINING:

- Naval Safety Center

- Naval Post Graduate School

- MAWTS - 1

ORM UPDATE

- 5 "Train the Trainers" Courses @ **NSC**

- 39 USMC Aviators attended TTT Course

- 80% of USMC Squadrons

ORM:
WHERE ARE THE TRAINERS?

- 1st MAW: 5

- 2nd MAW: 12

- 3rd MAW: 10

- 4th MAW: 8

  - HMX-1, MAWTS-1, V-22 Test & Eval, SD

Some trainers have already PCSed

SQUADRON ASSISTANCE RISK ASSESSMENT "SARA"

- MAGs 11, 13 & 14 have SARA prototype

- All MAWs to receive SARA

- Requires hardware & training

Your **Next** Mishap . . . Who, Not

- ⭐ Self-discipline
- ⭐ Leadership
- ⭐ Training
- ⭐ Standards
- ⭐ Support

5036B

"Life is tough, but it's tougher if you're stupid"

Sergeant John M. Stryker, USMC, in "The Sands of Iwo Jima"

5016